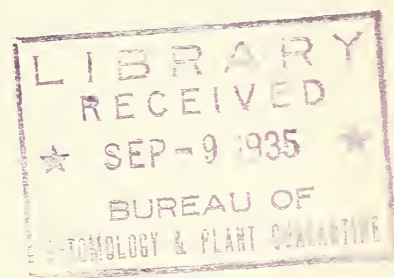


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HESSIAN FLY INFESTATION AT HARVEST TIME 1935

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The surveys here reported cover the main winter-wheat regions of the central and eastern parts of the United States. The hessian fly has increased greatly in abundance since last year throughout much of the Wheat Belt, as a result of favorable weather conditions both in the fall and in the spring. Late summer rains last year in the East Central States, caused the growth of much volunteer wheat, which served as a medium for the development of an extra late-summer generation of fly and an important source of severe spring infestations in wheat sown this year. The situation was further aggravated by considerable wheat sown early last fall, which also became infested by the fall brood and provided an additional source of spring infestation. During the past year the rapidity with which this insect can increase in two successive favorable seasons has been strikingly manifested.

On August 22, 1935, conditions were still favorable for further increase. Parasitization and summer mortality of puparia in stubble have been moderate. Volunteer wheat is already growing, and pupation and egg laying have begun. With continued favorable conditions this coming fall, a severe outbreak seems certain, and strict observance of the safe sowing dates is especially important. Wheat stubble and volunteer should also be promptly plowed under wherever possible.

Hessian fly is present in threatening numbers throughout a belt of variable width, shown on the following map, extending from southeastern Kansas to east-central Pennsylvania, and including the southern two-thirds of Missouri, central Illinois, and most of Indiana and Ohio, with the area of greatest intensity centering in Indiana, where extremely severe infestations occurred in some fields. The Shenandoah Valley of Virginia also contains considerable infestations. Most of the data from Ohio and Illinois, and part of the Missouri data, were obtained by State entomologists. In the other places the data were obtained by Bureau entomologists and were based on individual field samples consisting of fifty stems each. The data serving as the basis of this report are summarized in the following table:

Area	: Number of fields: : sampled	Percentage of stems infested		
		: Average	: Maximum	: Minimum
Nebraska:	:	:	:	:
Southwestern-----	11	: trace	: 2	: 0
South-central-----	18	: 0	: 0	: 0
Southeastern-----	26	: trace	: 2	: 0
Kansas:	:	:	:	:
Northwestern-----	12	: 0	: 0	: 0
North-central-----	26	: trace	: 2	: 0
Northeastern-----	35	: 2	: 28	: 0
South-central-----	24	: 2	: 18	: 0
Southeastern-----	32	: 12	: 50	: 0
Oklahoma:	:	:	:	:
Northeastern-----	18	: 1	: 6	: 0
Missouri:	:	:	:	:
Northwestern-----	20	: 5	: 18	: 0
Northeastern-----	12	: 1	: 2	: 0
West-central-----	39	: 10	: 62	: 0
East-central-----	22	: 33	: 90	: 6
Southwestern-----	16	: 24	: 70	: 2
Southeastern-----	14	: 28	: 68	: 0
Illinois:*	:	:	:	:
Northwestern-----	24	: 12	: --	: --
Northeastern-----	24	: 4	: --	: --
West-central-----	54	: 3	: --	: --
East-central-----	97	: 19	: --	: --
Southern-----	43	: 3	: --	: --
Michigan:	:	:	:	:
Southern-----	39	: 10	: 40	: 0
Indiana:	:	:	:	:
Central and northern-----	103	: 52	: 90	: 8
Southern-----	97	: 14	: 66	: 0
Ohio:*	:	:	:	:
Except southeastern part--	340 (approx.)	: 29	: --	: --
Kentucky:	:	:	:	:
Western-----	6	: 0	: 0	: 0
North-central-----	13	: 9	: 36	: 0
Tennessee:	:	:	:	:
Central-----	22	: 7	: 50	: 0
Eastern-----	33	: 1	: 10	: 0
Pennsylvania:	:	:	:	:
West-central-----	20	: 34	: --	: --
Central-----	20	: 38	: --	: --
Southeastern-----	83	: 5	: --	: --
Maryland:	:	:	:	:
North-central-----	25	: 5	: --	: --
Eastern-----	15	: 1	: --	: --
Delaware-----	15	: 1	: --	: --
Virginia:	:	:	:	:
Northwestern-----	20	: 15	: --	: --
Northeastern-----	45	: 5	: --	: --
South-central-----	15	: 7	: --	: --
North Carolina:	:	:	:	:
Central-----	30	: 6	: --	: --

*Mostly from survey by State entomologists.

Numbers indicate percentage of infestation. Horizontal crosshatching indicates areas of severe infestation. Diagonal crosshatching indicates areas of very severe infestation. tr. indicates trace--less than 1 percent.

